TOOZHO" 8266860

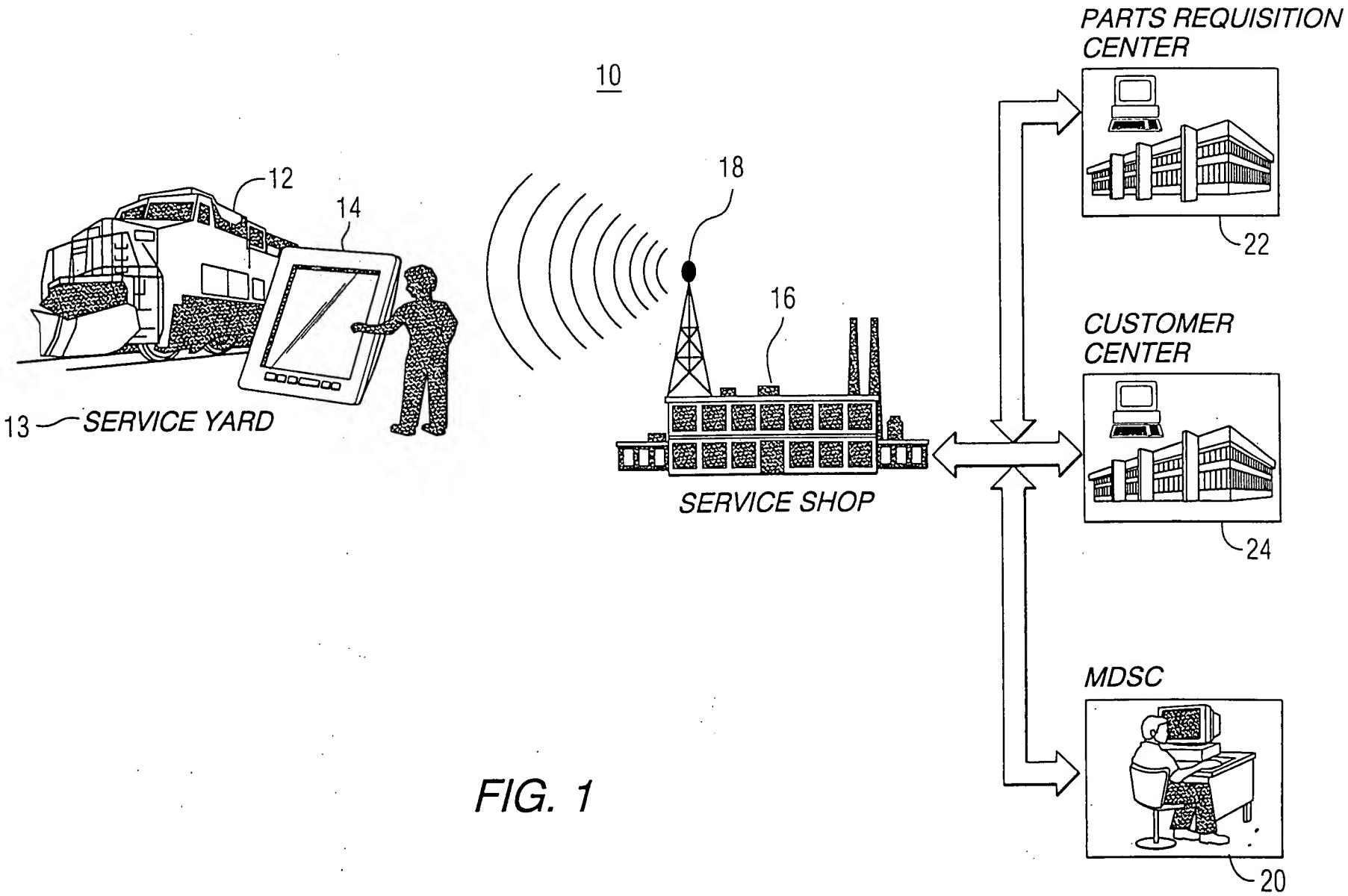

FIG. 1

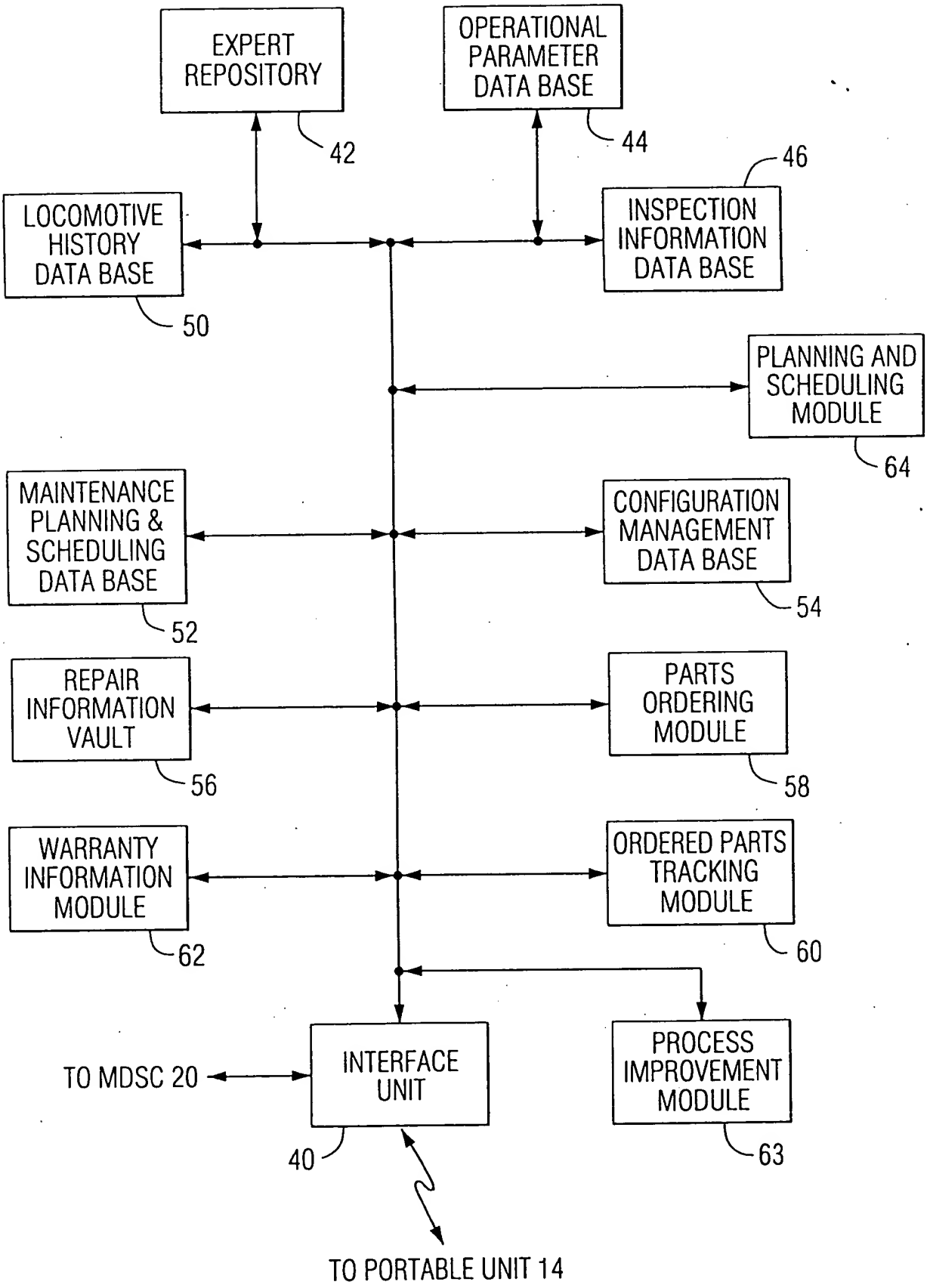
EXPERT REPOSITORY
42
OPERATIONAL PARAMETER DATA BASE
44
46
LOCOMOTIVE HISTORY DATA BASE
50
INSPECTION INFORMATION DATA BASE
PLANNING AND SCHEDULING MODULE
64
MAINTENANCE PLANNING & SCHEDULING DATA BASE
52
CONFIGURATION MANAGEMENT DATA BASE
54
REPAIR INFORMATION VAULT
56
PARTS ORDERING MODULE
58
WARRANTY INFORMATION MODULE
62
ORDERED PARTS TRACKING MODULE
60
TO MDSC 20
INTERFACE UNIT
40
PROCESS IMPROVEMENT MODULE
63
TO PORTABLE UNIT 14

FIG. 2

TOZHO" 82E6E860

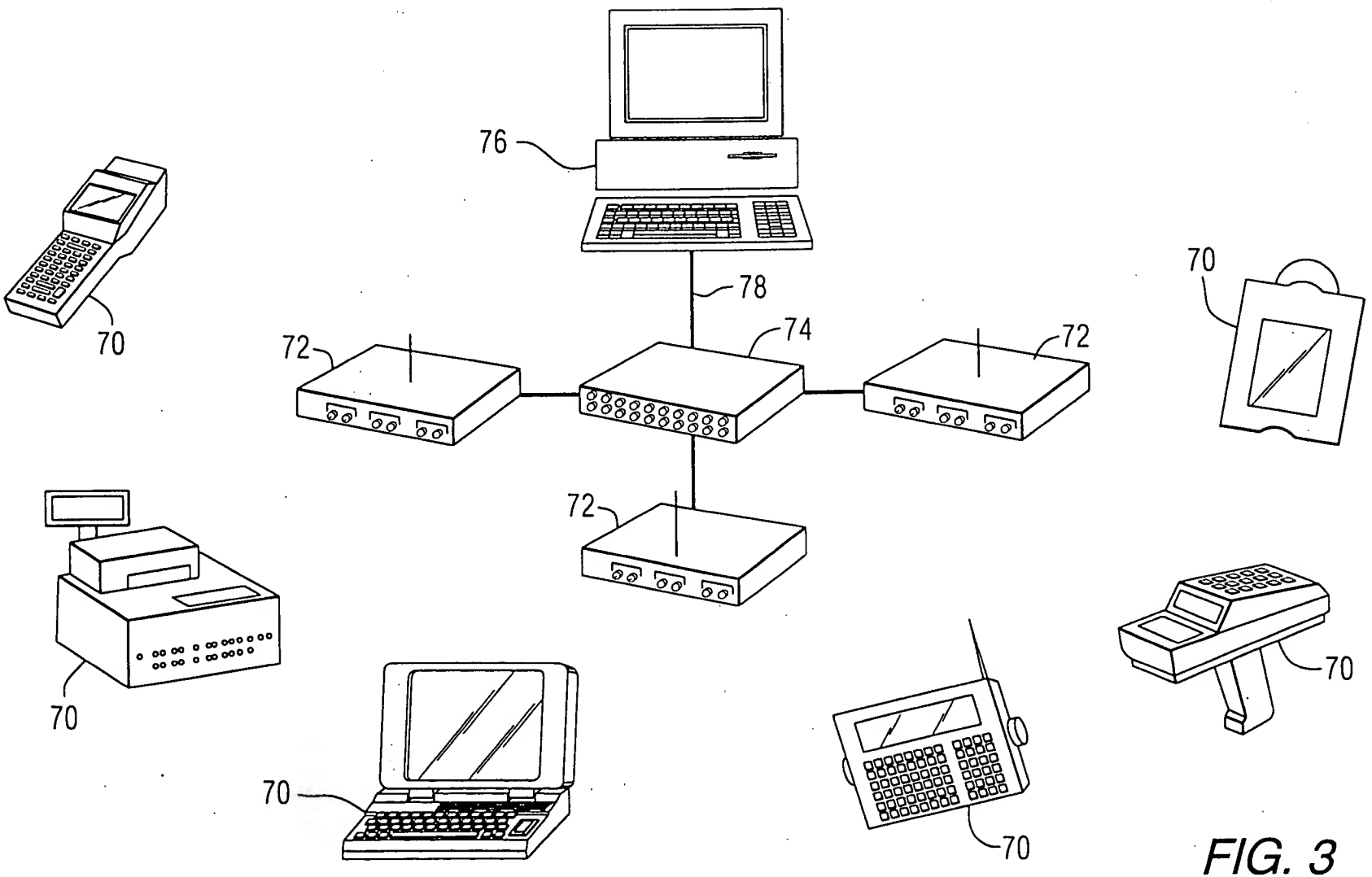

FIG. 3

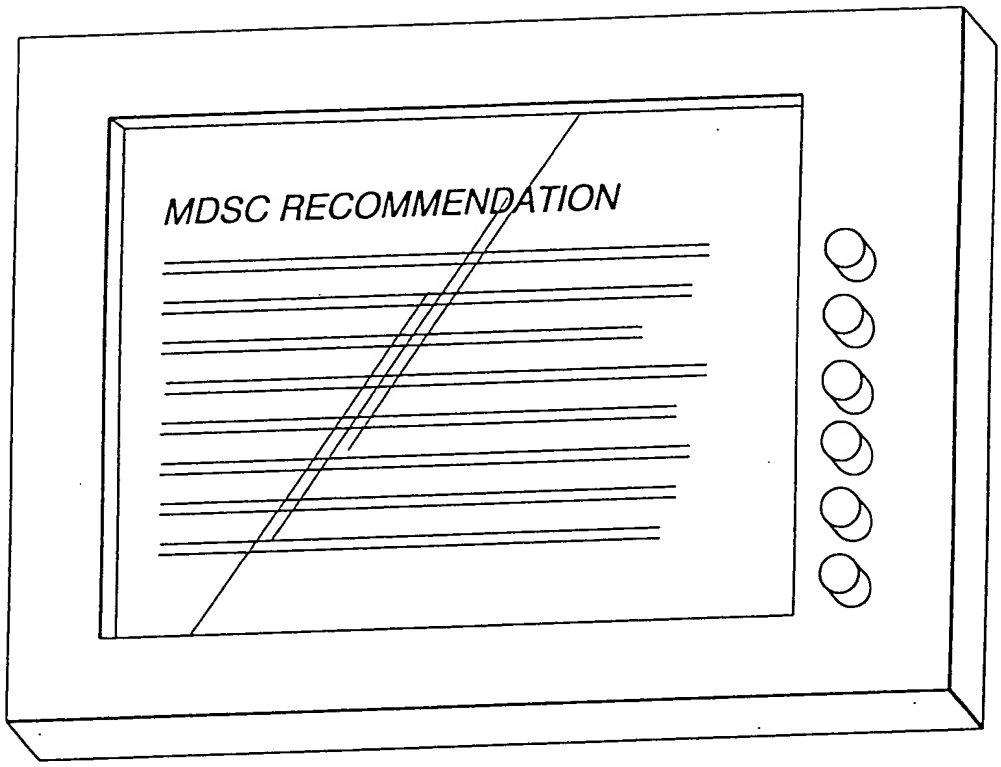

FIG. 4

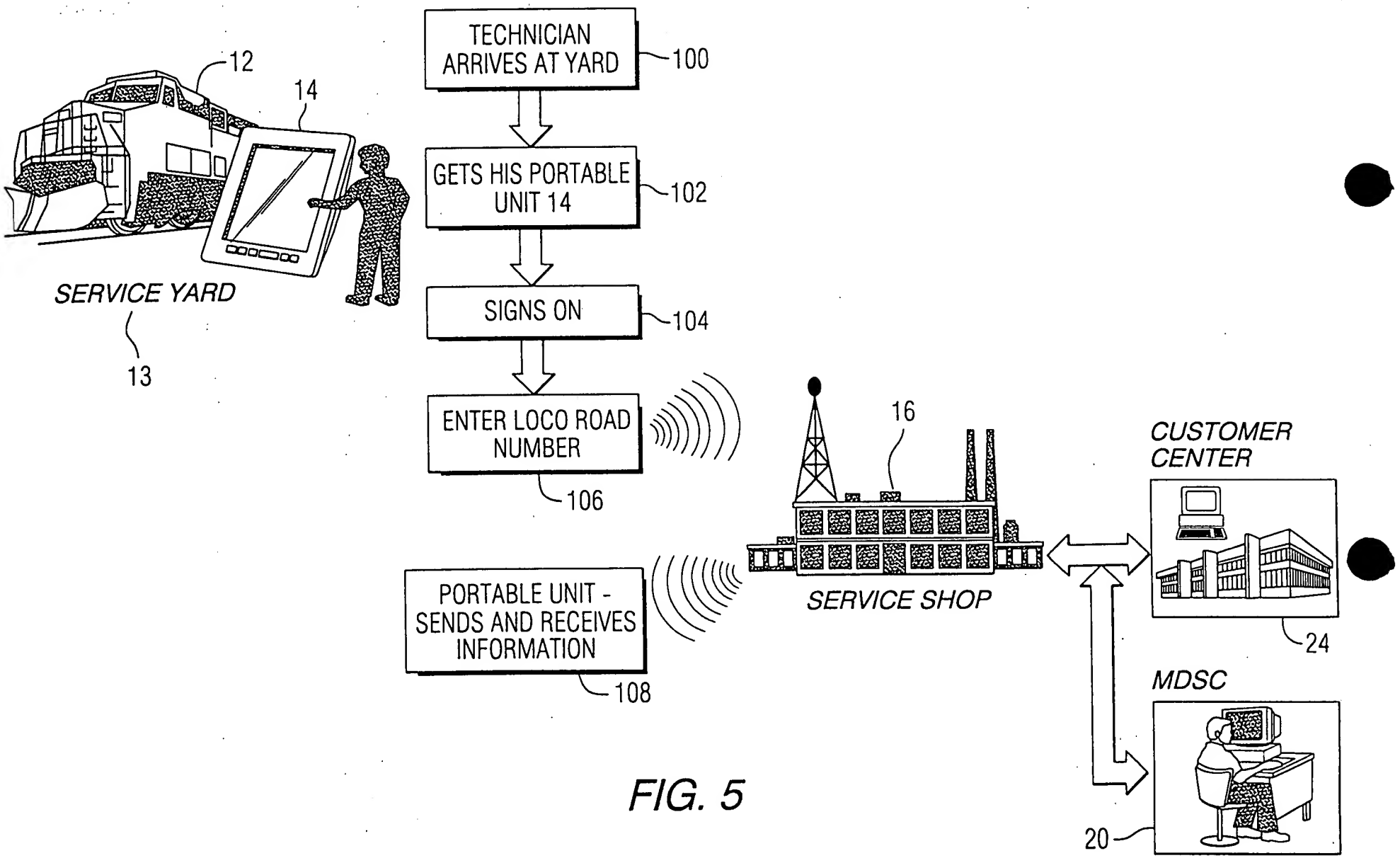
12
14
SERVICE YARD
13
TECHNICIAN ARRIVES AT YARD
100
GETS HIS PORTABLE UNIT 14
102
SIGNS ON
104
ENTER LOCO ROAD NUMBER
106
PORTABLE UNIT - SENDS AND RECEIVES INFORMATION
108
16
SERVICE SHOP
CUSTOMER CENTER
24
MDSC
20

FIG. 5

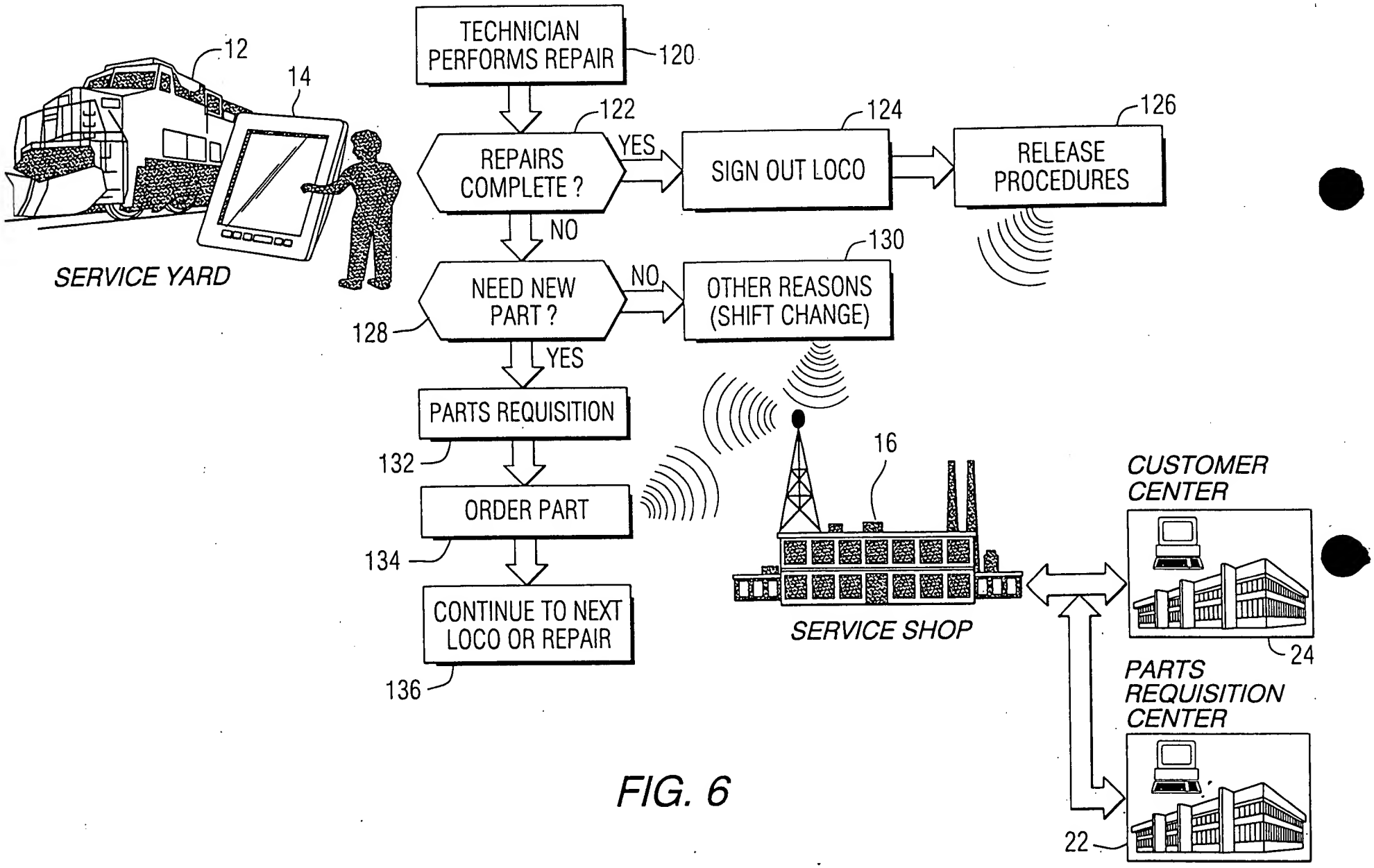
12
14
SERVICE YARD
TECHNICIAN PERFORMS REPAIR
120
122
REPAIRS COMPLETE ?
YES
NO
124
SIGN OUT LOCO
126
RELEASE PROCEDURES
130
NEED NEW PART ?
NO
OTHER REASONS (SHIFT CHANGE)
128
YES
PARTS REQUISITION
132
ORDER PART
134
CONTINUE TO NEXT LOCO OR REPAIR
136
16
SERVICE SHOP
CUSTOMER CENTER
24
PARTS REQUISITION CENTER
22

FIG. 6

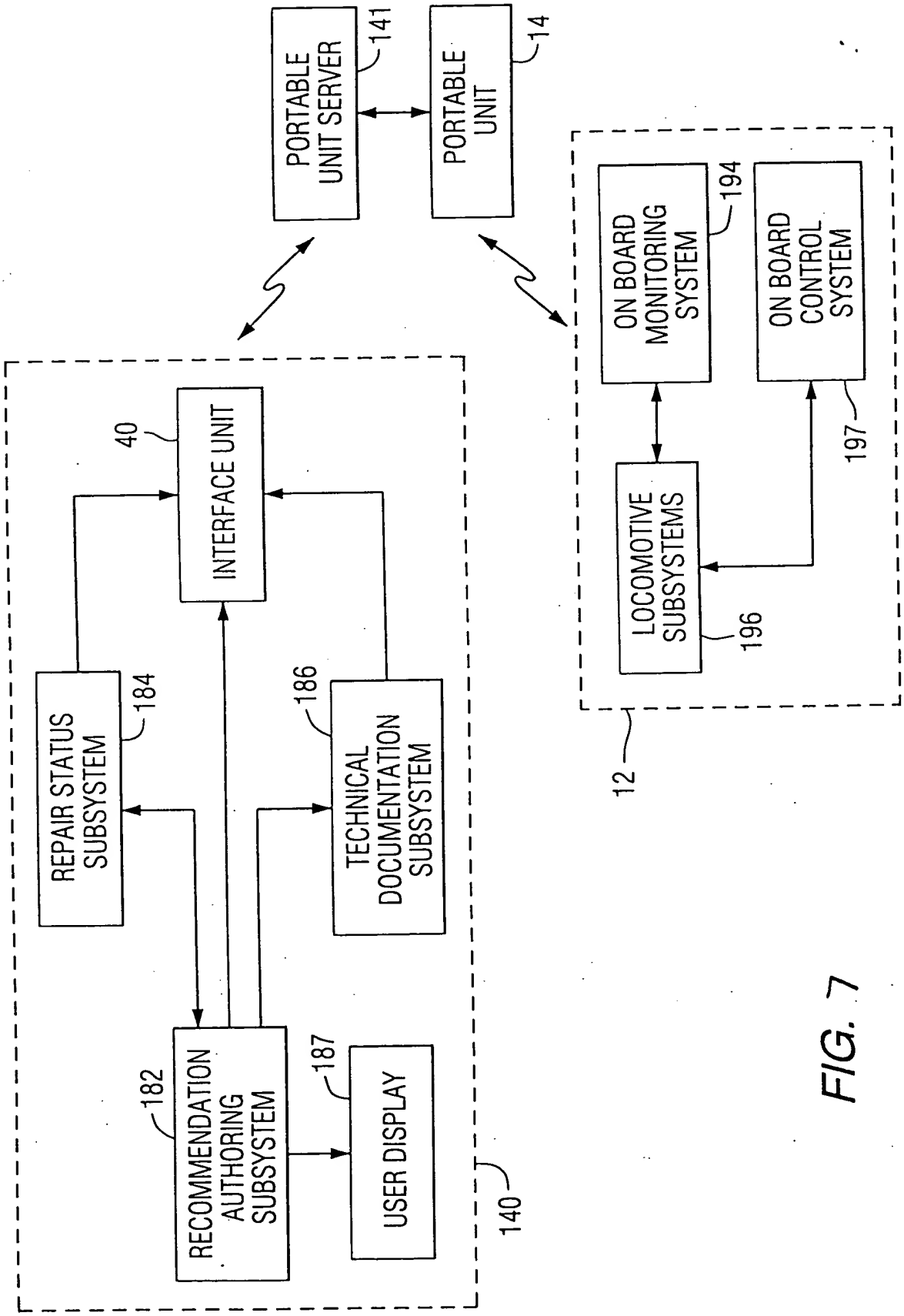
PORTABLE UNIT SERVER
141
PORTABLE UNIT
14
ON BOARD MONITORING SYSTEM
194
ON BOARD CONTROL SYSTEM
197
LOCOMOTIVE SUBSYSTEMS
196
12
40
INTERFACE UNIT
REPAIR STATUS SUBSYSTEM
184
186
TECHNICAL DOCUMENTATION SUBSYSTEM
182
RECOMMENDATION AUTHORING SUBSYSTEM
187
USER DISPLAY
140

FIG. 7

251 The following is an example of one of the trouble shooting wizards.

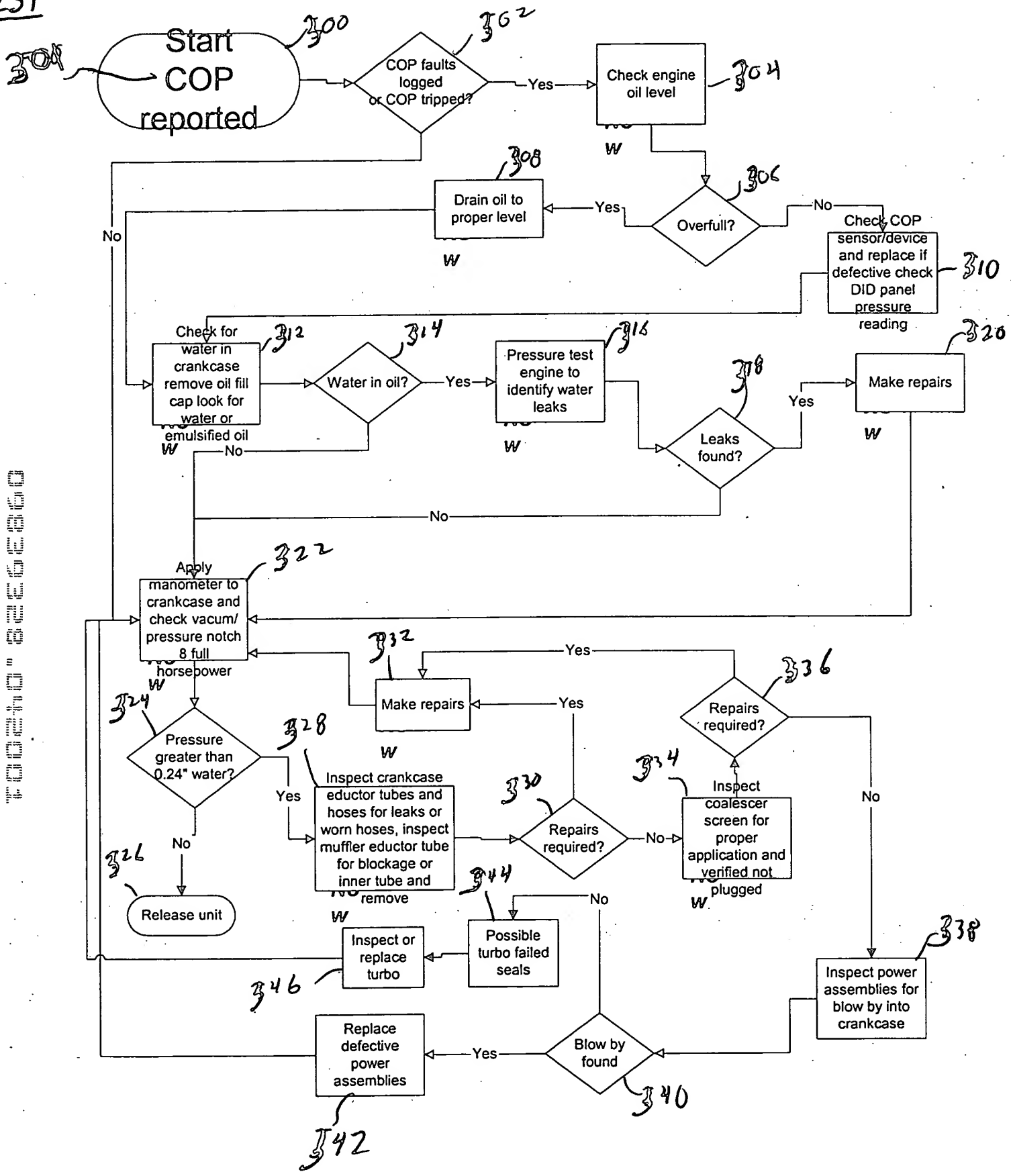

FIG 8

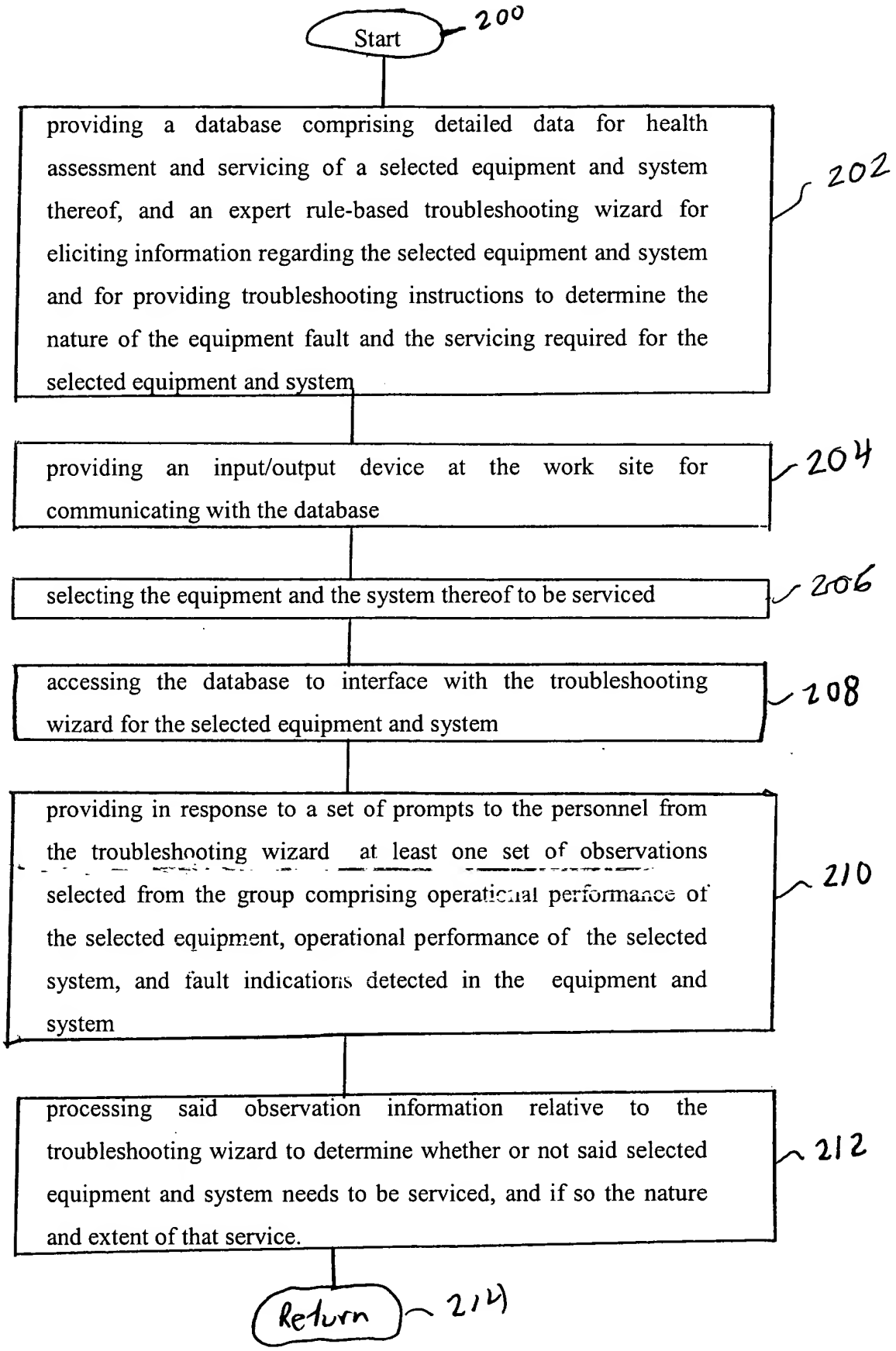
Start
200
providing a database comprising detailed data for health assessment and servicing of a selected equipment and system thereof, and an expert rule-based troubleshooting wizard for eliciting information regarding the selected equipment and system and for providing troubleshooting instructions to determine the nature of the equipment fault and the servicing required for the selected equipment and system
202
providing an input/output device at the work site for communicating with the database
204
selecting the equipment and the system thereof to be serviced
206
accessing the database to interface with the troubleshooting wizard for the selected equipment and system
208
providing in response to a set of prompts to the personnel from the troubleshooting wizard at least one set of observations selected from the group comprising operational performance of the selected equipment, operational performance of the selected system, and fault indications detected in the equipment and system
210
processing said observation information relative to the troubleshooting wizard to determine whether or not said selected equipment and system needs to be serviced, and if so the nature and extent of that service.
212
Return
214

FIG. 9

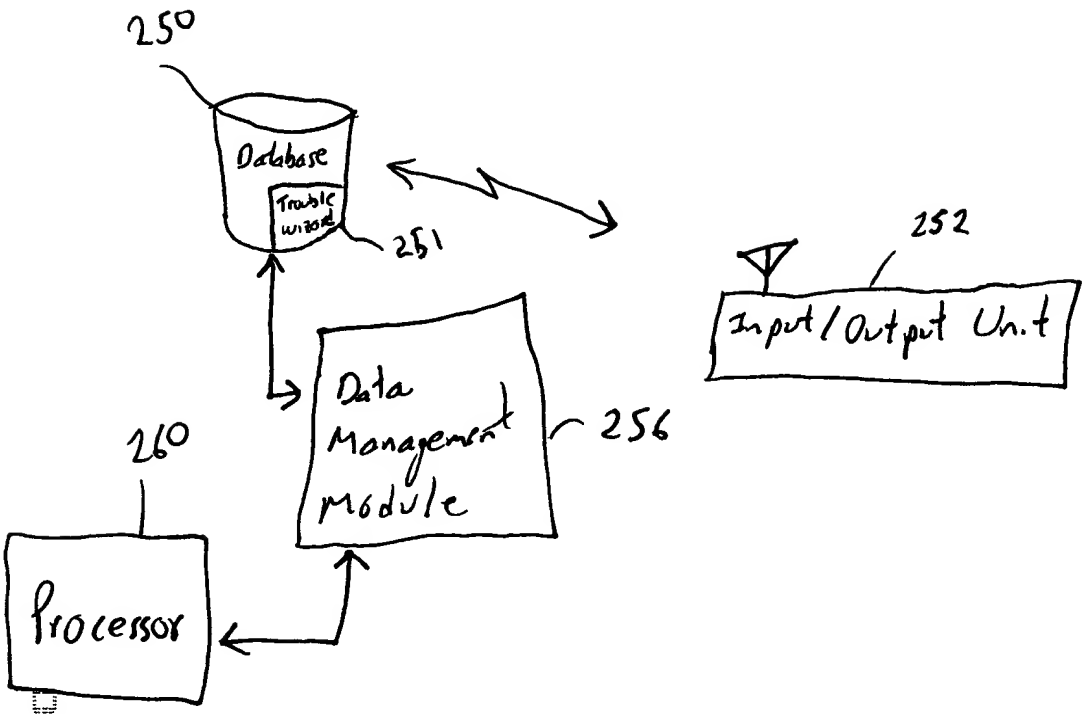
250
Database
Trouble ticket
251
252
Input/Output Unit
Data Management Module
256
260
Processor

FIG. 10

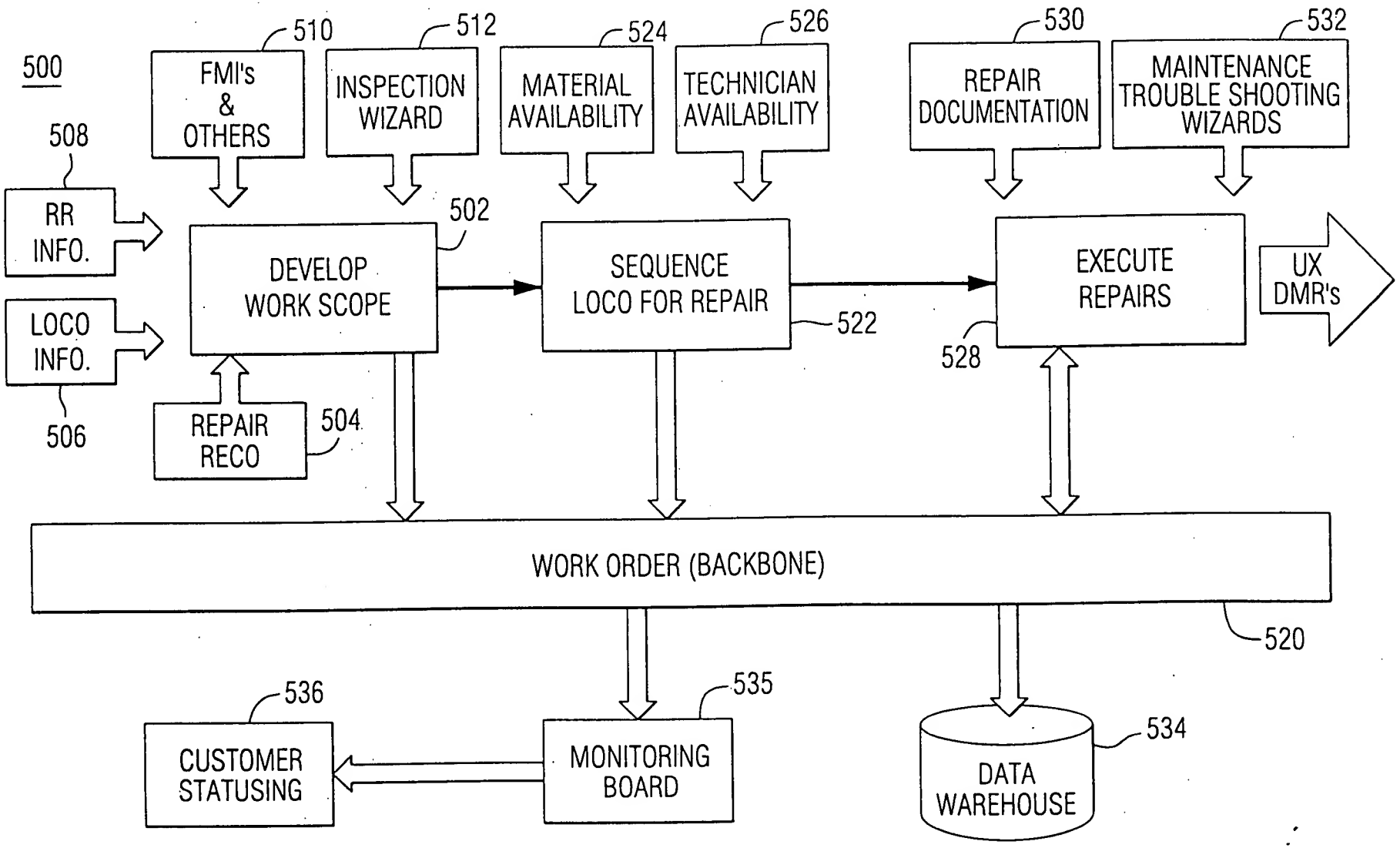
500
510
FMI's & OTHERS
512
INSPECTION WIZARD
524
MATERIAL AVAILABILITY
526
TECHNICIAN AVAILABILITY
530
REPAIR DOCUMENTATION
532
MAINTENANCE TROUBLE SHOOTING WIZARDS
508
RR INFO.
LOCO INFO.
506
502
DEVELOP WORK SCOPE
SEQUENCE LOCO FOR REPAIR
522
EXECUTE REPAIRS
528
UX DMR's
REPAIR RECO
504
WORK ORDER (BACKBONE)
520
536
CUSTOMER STATUSING
535
MONITORING BOARD
534
DATA WAREHOUSE

FIG. 11